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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HARNESS, DICKEY & PIERCE, P.L.C.
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EXAMINER

MOORE, JAMES K

ART UNIT	PAPER NUMBER
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2686

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9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/393,300	Applicant(s) RAHMAN, MOHAMED ANISUR	
	Examiner James K Moore	Art Unit 2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13, 15-19 and 25-47 is/are pending in the application.
- 4a) Of the above claim(s) 25-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13, 15, 16, 19, 32, 34-40 and 42-47 is/are rejected.
- 7) ☒ Claim(s) 17, 18, 33 and 41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 13, 15, 16, and 19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 38 is objected to because of the following informalities: in line 9, the examiner suggests changing the claim language to read "the service node directing the data message...".

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 46 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification does not describe the claimed limitation "sending the received information from the central database to the service node, the received information

indicating to the service node that the first wireless system should be queried in response to receiving a data message.”

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 recites the limitation "the user profiles stored in the central database" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 13 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Lorello et al. (U.S. Patent No. 6,459,904).

Regarding claim 13, Lorello discloses a system for directing a data message in a hybrid communications network including multiple wireless systems. The system comprises a central database (a VLR) that sends update information to update a user profile (stored in a HLR) in response to service for a mobile station being transferred

from a first wireless system to a second wireless system. See col.2, lines 51-53; col. 2, line 66 through col. 3, line 4; and col. 3, lines 14-26. One skilled in the art recognizes that in some circumstances the first wireless system will be the system which includes the HLR. The system also comprises a service node (SMSC) that directs a data message for a mobile station through the second wireless system, as facilitated by the updated user profile, to deliver the data message to the mobile station during its operation on the second wireless system. See col. 4, lines 1-21.

Regarding claim 15, Lorello discloses all of the limitations of claim 13, and also discloses that the system comprises an authenticator for authenticating the mobile station after the transfer from the first wireless system to the second wireless system. See col. 4, lines 16-18.

9. Claims 32, and 34-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Ho et al. (U.S. Patent No. 6,553,227).

Regarding claim 32, Ho discloses a method of managing data messages. The method comprises sending deregistration data (CANCEL_LOCATION_ACK message) from a first wireless system (in which an Old MSC is located) to a central database (HLR) based on a mobile station transferring from the first wireless system to a second wireless system (in which a New MSC is located). See col. 23, lines 30-35; Figure 20B; and col. 24, lines 54-56. The central database indicates which wireless system provides data messaging services for the mobile station. See col. 15, line 63 through col. 16, line 5. The method also comprises receiving update information (INSERT

SUBSCRIBER DATA message) for the mobile station from the central database. It is inherent that the update information includes an identifier of the second wireless system because it is routed to the second wireless system. The method also comprises updating a user profile of the mobile station in a visitor location register based on the received update information. The user profile is updated to indicate that the second wireless system provides data messaging services to the mobile station. See col. 24, lines 57-60.

Regarding claim 34, Ho discloses all of the limitations of claim 32, and also discloses that the step of sending deregistration data includes sending a signaling message to the central database after the transferring of the mobile station. See col. 24, lines 52-56. It is also inherent that the signaling message includes a mobile identifier and information identifying the first wireless system because the signaling message acknowledges the cancellation of the mobile identifier from the first wireless system.

Regarding claim 35, Ho discloses all of the limitations of claim 34. It is also inherent that the first wireless system is a public wireless system, and that the step of sending deregistering data includes sending a mobile switching center identifier as the information identifying the first wireless system because the deregistration data is sent from the New MSC.

Regarding claim 36, Ho discloses all of the limitations of claim 32, and also discloses that the method comprises cooperating, at the first wireless system, with the second wireless system to transfer service to the second wireless system when the

mobile station enters the second wireless system. See col. 23, lines 43-65. It is inherent that the mobile station recognizes that it enters the second wireless system based on a signal parameter measured at the mobile station (such as signal strength or quality) satisfying a first transfer condition.

Regarding claim 37, Ho discloses all of the limitations of claim 36, and it is inherent that the method comprises cooperating, at the first wireless system, with the second wireless system to transfer service back to the first wireless system, if the signal parameter measured at the mobile station satisfies a second transfer condition.

10. Claims 38-40, 42-45, and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by Josse et al. (U.S. Patent No. 6,104,929).

Regarding claim 38, Josse discloses a method of managing data messages. The method comprises sending registration data (Update Location message) from a first wireless system (the system served by SGSN 24₂) to a central database (HLR 26₁) based on a mobile station (40) transferring from a second wireless system (the system served by SGSN 24₁) to the first wireless system. The central database updates a user profile in the second wireless system, which provides data messaging services for the mobile station. The method also comprises receiving a data message for the mobile station from a service node (GGSN 20). The service node directs the data message based on the update user profile in the second wireless system. See Figure 1; col. 2, lines 15-32 and 44-58; col. 5, line 59 through col. 6, line 12; and col. 7, lines 22-33.

Regarding claim 39, Josse discloses all of the limitations of claim 38, and also disclose that the method comprises sending the received data message to the mobile station. See col. 5, lines 59-67.

Regarding claim 40, Josse discloses all of the limitations of claim 38, and also discloses that the step of sending registration data includes sending a signaling message (Update Location message) to the central database during the transferring of the mobile station, and that the signaling message includes a mobile identifier (IMSI) and information identifying the first wireless system (SGSN Address). See col. 8, lines 61-65.

Regarding claim 42, Josse discloses all of the limitations of claim 38, and also discloses that the method comprises cooperating, at the first wireless system, with the second wireless system to transfer service to the first wireless system when the mobile station enters the first wireless system. See col. 7, lines 15-32. It is inherent that the mobile station recognizes that it enters the first wireless system based on a signal parameter measured at the mobile station (such as signal strength or quality) satisfying a first transfer condition.

Regarding claim 43, Josse discloses all of the limitations of claim 42, and it is inherent that the method comprises cooperating, at the first wireless system, with the second wireless system to transfer service back to the second wireless system, if the signal parameter measured at the mobile station satisfies a second transfer condition.

Regarding claim 44, Josse discloses a method of managing data messages. The method comprises receiving information based on a mobile station (40) transferring

from a first wireless system (the system served by SGSN 24₁) to a second wireless system (the system served by SGSN 24₂). The received information includes registration data (Update Location message) from the second wireless system. The method also comprises updating a central database (HLR 26₁) based on the registration information. The central database indicates which wireless system provides data messaging services for the mobile station. The method also comprises sending update information (Update Location message) to the first wireless system. The update information is used by the first wireless system to update a user profile of the mobile station in a home location register (HLR 26₁) to indicate that the second wireless system provides data messaging services to the mobile station. See Figure 1; col. 2, lines 15-32 and 44-58; col. 5, line 59 through col. 6, line 12; and col. 7, lines 22-33.

Regarding claim 45, Josse discloses all of the limitations of claim 44, and also discloses that the method comprises receiving at a service node (GGSN 20) a data message for the mobile station, querying the first wireless system based on the received data message, receiving an indication from the first wireless system that the second wireless system is providing data messaging services to the mobile station, and directing a data message for the mobile station from the service node to the second wireless system. See col. 5, lines 59-67.

Regarding claim 47, Josse discloses all of the limitations of claim 44, and also discloses that the method comprises receiving at a service node (GGSN 20) a data message for the mobile station, querying the central database based on the received data message, receiving an indication from the first wireless system that the second

wireless system is providing data messaging services to the mobile station, and directing a data message for the mobile station from the service node to the second wireless system. See col. 5, lines 59-67.

Claim Rejections - 35 USC § 103

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

12. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lorello et al. in view of Maupin et al. (U.S. Patent No. 5,712,900).

Regarding claim 16, Lorello discloses all of the limitations of claim 13, and it is inherent that the first wireless system is a public wireless system. Lorello does not disclose that the central database is configured to receive and store a signaling message containing deregistration information from the first wireless system, or that the deregistration information includes at least one of a mobile switching center identifier and a cell identifier.

Maupin discloses a wireless network that allows subscribers to roam between wireless systems. Each wireless system includes a central database (MSC/VLR) containing subscriber registration information. When a subscriber leaves a wireless system, the central database receives and stores a signaling message from an HLR containing deregistration information. The central database then deregisters the subscriber from the database since the registration information is no longer needed.

This clears memory space in the database. See col. 5, line 56 through col. 6, line 21. It is inherent that the deregistration information includes the identifier of the mobile switching center because it is needed to route the information to the mobile switching center. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lorello with Maupin, such that the central database receives and stores a signaling message containing deregistration information from the first wireless system, and that the deregistration information includes a mobile switching center identifier, in order to free space in the central database when subscriber registration information is no longer needed.

13. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lorello et al. in view of Janhonen et al. (U.S. Patent No. 6,345,181).

Regarding claim 19, Lorello discloses all of the limitations of claim 13, but does not disclose that the system comprises a service control point for maintaining the user profiles stored in the central database.

Janhonen discloses a wireless system that provides mobile subscribers with cheaper tariffs in special cells. The system comprises a service control point which stores information regarding the special cells. When a mobile subscriber updates its location and registers with a central database (VLR) an intelligent network service is triggered. The service control point updates a profile of the subscriber stored in the central database with information regarding the special cells if the subscriber is located in a special cell, and the subscriber receives cheaper tariffs. See Abstract and col. 2,

lines 55-67. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lorello with Janhonen, such that the system comprises a service control point for maintaining the user profiles stored in the central database, in order to provide a user with intelligent network services, such as cheaper tariffs.

Citation of Pertinent Prior Art

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Liu et al. (U.S. Patent No. 5,949,770) discloses a private wireless system having a private system identifier number.

Allowable Subject Matter

15. Claims 17, 18, 33, and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. The following is a statement of reasons for the indication of allowable subject matter:

The present invention is directed to a system for directing a data message in a hybrid communications network including a first wireless system and a second wireless system. The system comprises a central database that sends update information to

update a user profile in the first wireless system in response to service for a mobile station being transferred from the first wireless system to the second wireless system.

Claim 17 identifies the uniquely distinct feature "the second wireless system is a private wireless system, which is assigned a private system identifier number based on a geographic location of the private wireless system."

Hentila et al. (U.S. Patent No. 6,219,551) discloses a private wireless system comprising a central database that stores subscribers currently registered in the system. See col. 6, lines 11-39. Liu et al. discloses a private wireless system that is assigned a private system identifier number. See col. 5, line 63 through col. 6, line 13. However, Lorella, Hentila, and Liu fail to anticipate or render the above underlined limitations obvious.

Claim 18 identifies the uniquely distinct feature "the second wireless system is a private wireless system that includes a private branch exchange for assigning a private system identifier for the private wireless system based on geographic coordinates of the mobile station within the private wireless system."

Hentila et al. discloses a private wireless system that includes a private branch exchange, but Lorella and Hentila fail to anticipate or render the above underlined limitations obvious.

The present invention is also directed to a method of managing data messages. The method comprises sending deregistration data from a first wireless system to a central database based on a mobile station transferring from the first wireless system to a second wireless system, and receiving update information including an identifier of the

second wireless system. The update information includes an identifier of the second wireless system. The method also comprises updating a user profile of the mobile station in at least one of a home location register and a visitor location register based on the received update information.

Claim 33 identifies the uniquely distinct feature "sending the identifier of the second wireless system to a service node in response to the service node querying the home location register."

The closest prior art, Ho et al., discloses a method of managing data messages. The method comprises sending deregistration data from a first wireless system to a central database based on a mobile station transferring from the first wireless system to a second wireless system, and receiving update information including an identifier of the second wireless system. The update information includes an identifier of the second wireless system. The method also comprises updating a user profile of the mobile station in a visitor location register based on the received update information. However, Ho fails to anticipate or render the above underlined limitations obvious.

The present invention is also directed to another embodiment of a method of managing data messages. The method comprises sending registration data from a first wireless system to a central database based on a mobile station transferring from a second wireless system to the first wireless system. The first wireless system is a private wireless system.

Claim 41 identifies the uniquely distinct feature "the private system identifier being assigned based on a geographic location within the coverage area of the first wireless system."

The closest prior art, Josse et al., discloses a method of managing data messages. The method comprises sending registration data from a first wireless system to a central database based on a mobile station transferring from a second wireless system to the first wireless system. Hentila et al. discloses a private wireless system comprising a central database that stores subscribers currently registered in the system. See col. 6, lines 11-39. Liu et al. discloses a private wireless system that is assigned a private system identifier number. See col. 5, line 63 through col. 6, line 13. However, Josse, Hentila, and Liu fail to anticipate or render the above underlined limitations obvious.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ken Moore, whose telephone number is (703) 308-6042. The examiner can normally be reached on Monday-Friday from 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold, can be reached at (703) 305-4379.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

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Ken Moore

8/7/03

JKM

nguyentvo

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PRIMARY EXAMINER